



## GRAIN TRANSPORTATION REPORT

Transportation & Marketing, Agricultural Marketing Service  
United States Department of Agriculture

MARCH 27, 2003

<u>TM GRAIN TRANSPORT COST</u> <u>INDICATORS</u>	<u>Truck</u>	<u>Rail</u>	<u>Barge</u>	<u>Ocean</u>	
				<u>Gulf</u>	<u>PNW</u>
Indicator Value* for 03/27	111	106	86	135	141
Compared to Last Week	↓	↑	↓	→	↑
*Indicator: Base Year 2000=100; Weekly Updates include Truck=Diesel; Rail=Nearby Secondary Rail Market; Barge=Spot Illinois River Basis; Ocean Vessel based on Routes to Japan					

**Ten-Year Volume Increase for Containerized Grain Exports.** Over the past 10 years, containerized soybean exports have more than quadrupled, and animal feed container exports have increased by more than 150 percent. Soybeans and animal feed continually rank in the top 10 of all U.S. agricultural exports moved by container annually. In 2001, these two commodities accounted for almost 50 percent of all grain and grain products exported via container.

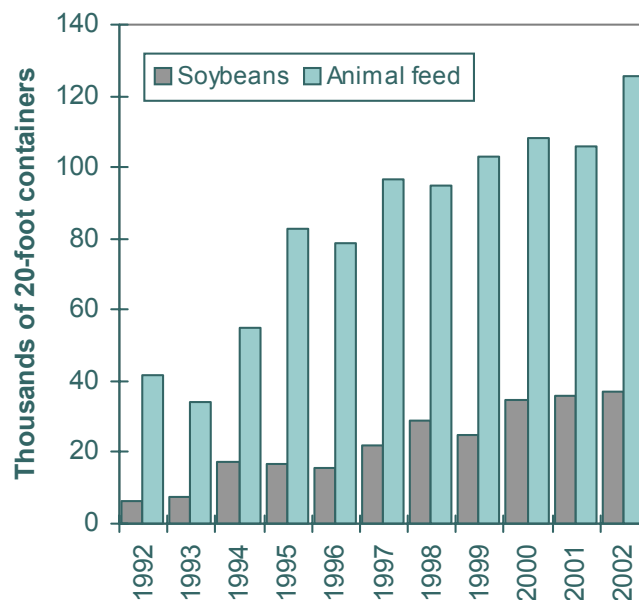
**Volumes Projected To Increase.** Buyers are more frequently requesting that specialty grain shipments (including organically produced grains and grains with specific color, protein, or other intrinsic attributes) be stored and transported using methods, such as containerization, that provide identity preservation. As this demand for containerized shipping continues to grow, so should volumes of containerized grain and grain products, both in the short and long term. Total exports for 2002 were 36,841 20-foot containers of soybeans and 125,338 20-foot containers of animal feed. In addition, USDA reports that demand for feed is strong (WASDE-393, USDA, December 10, 2002) and also projects that soybean exports for the United States will increase (WASDE-394, USDA, January 10, 2003).

**Rail Capacity for Grain Expected To Be Adequate This Spring.** Rail grain volumes are expected to be slightly down for the first half of 2003 due, in part, to the effects of last summer's drought. Covered hopper railcar capacity has steadily increased during the 1990s, and the use of unit- and shuttle-trains has decreased the cycle times for a railcar of grain. Thus, railroads can haul more loads of grain annually with each railcar than was possible in the past. Railroads report, however, that longer distance hauls this fall and winter have resulted in longer cycle times, thereby resulting in tighter railcar supply.

**Guaranteed Railcar Markets Also Indicate Adequate Rail Capacity for Spring.** Low prices in the railcar auction markets and secondary railcar markets indicate adequate rail capacity for this spring. Many times, in the railcar auction markets for

February and March, no bids have been tendered or the bids range from \$0 to \$2 per railcar (compared to no bid reported in the January 9, 2002, issue of the *Grain Transportation Report*). However, according to the January 14, 2003, issue of the *Grain Transportation Report*, bids are reported to be a little higher than bids reported in the January 9, 2002, issue for railcar delivery in comparable months. For more information, see the *Grain Transportation Prospects* at [www.ams.usda.gov/tmd/mta/index.htm](http://www.ams.usda.gov/tmd/mta/index.htm).

**Animal Feed and Soybean Exports by 20-Foot Container, 1992-2002**



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The Grain Transportation Report is a weekly news source for grain logistics. Detailed data and trend information on five major modes: barge, truck, rail, container, and vessel, provide timely insight into grain transport. The report is offered to policymakers and industry as a tool in day-to-day decision making and longer-term strategic planning for an effective and efficient U.S. grain logistics system.

### Market Update: U.S. Origins to Export Position Price Spreads (Per Bushel)

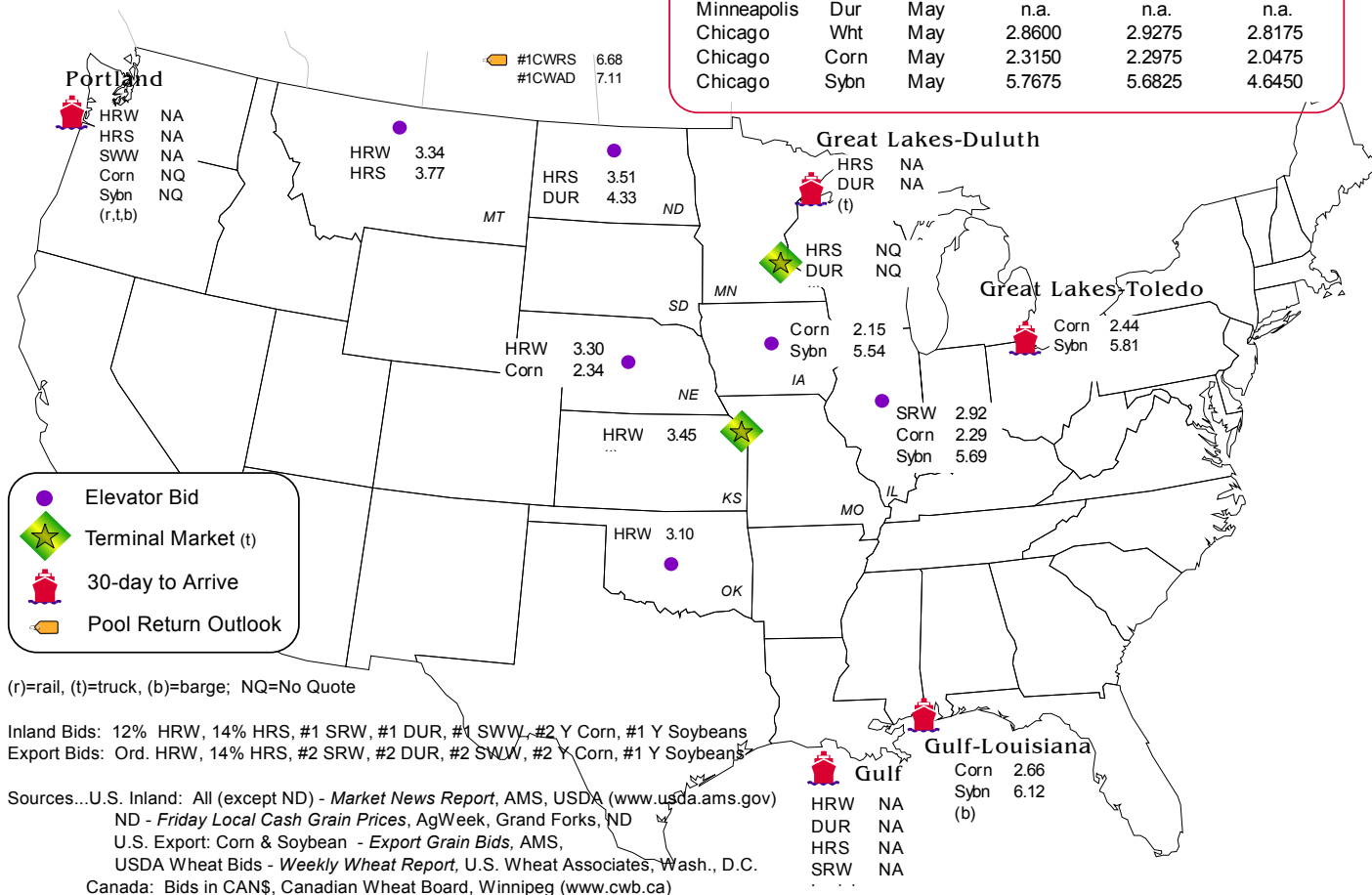
Commodity	Origin--Destination	This week	Last week
Corn	IL -- Gulf	-0.37	-0.35
Corn	NE -- Gulf	-0.32	-0.30
Soybean	IA -- Gulf	-0.58	-0.60
HRW	KS -- Gulf	3.45	-0.56
HRS	ND -- Portland	3.51	-1.07

The **Grain Bid Summary** illustrates the market relationships for commodities. Positive and negative adjustments in differential between terminal and futures markets, and the relationship to inland market points, are indicators of changes in fundamental market supply and demand. The map may be used to monitor market and time differentials.

## Grain Bid Summary

### Futures:

			03/21/2003	Week Ago 03/14/2003	Year Ago 03/22/2002
Kansas City	Wht	May	3.2000	3.2400	2.8200
Minneapolis	Wht	May	3.6025	3.6550	2.9450
Minneapolis	Dur	May	n.a.	n.a.	n.a.
Chicago	Wht	May	2.8600	2.9275	2.8175
Chicago	Corn	May	2.3150	2.2975	2.0475
Chicago	Sybn	May	5.7675	5.6825	4.6450



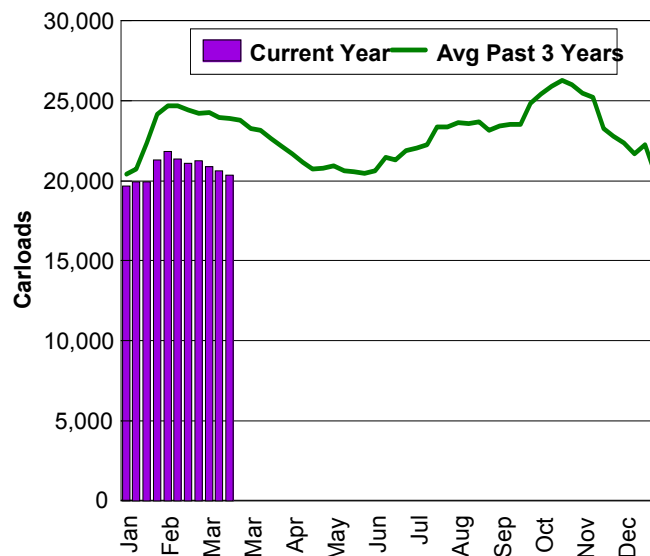
# RAIL TRANSPORTATION

## Rail Deliveries to Port (Carloads)

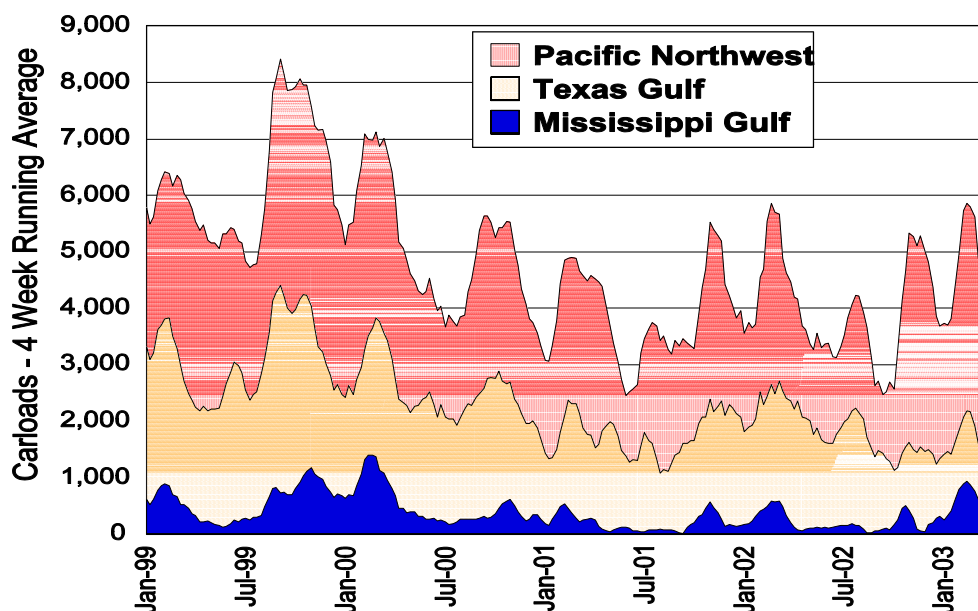
	Mississippi Gulf*	Texas Gulf	Pacific Northwest	Atlantic & East Gulf	Total
Week Ending:					
03/05/03	403	824	2,579	236	4,042
03/12/03	256	650	3,529	682	5,117
YTD 2003	7,085	11,680	35,786	7,190	61,741
YTD 2002	4,760	21,274	26,466	8,195	60,695
% YTD 2002	149%	55%	135%	88%	102%
Total 2002	11,112	83,799	111,719	21,551	228,181
Total 2001	10,022	81,804	111,376	26,604	229,806

Source: Transportation & Marketing/AMS/USDA; (\*) Incomplete Data

## Grain Car Loadings for Class I Railroads



## Rail Deliveries to Port



Railroads originate approximately 40% of U.S. grain shipments. Trends in these loadings are indicative of market conditions and expectations.

## Class I Rail Carrier Grain Car Bulletin (Grain Carloads Originated and Grain Service Index)

	East		BNSF	West		U.S. Total	Canada	
	CSXT	NS		KCS	UP		CN	CP
03/15/03	3,188	2,996	7,493	340	6,571	20,588	3,381	3,442
This Week Last Year	3,097	3,221	7,294	455	7,411	21,478	3,498	3,901
2003 YTD	32,429	35,182	85,808	4,208	72,264	229,891	36,334	35,937
2002 YTD	33,817	34,751	91,230	7,400	75,118	242,316	43,397	41,249
% of Last Year	96%	101%	94%	57%	96%	95%	84%	87%
2002 Total	142,760	164,745	400,179	27,161	344,296	1,079,141	191,835	195,765

## U.S. Rail Covered Hopper Cars Online Index\*

Feb-03	97.0	100.4	94.1	86.4	92.9	95.0
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Source: Association of American Railroads; \*Base Year =2001, Index based on Number of Covered Hopper Cars Online (available for Service).

Rail service may be ordered directly from the railroad via **Auction** for guaranteed service or tariff for non-guaranteed service, or through the secondary market. The **Secondary Rail Market** information reflects trade values for service that was originally purchased from the railroad carrier as some form of guaranteed freight. The auction and secondary rail values are indicators of rail service quality and demand/supply.

### Railroad Car 'Auction' Results

Average Premium/Discount to Tariff, \$/Car - Last Auction

Delivery for:	May-03	Jun-03	Jul-03
COT/N. Grain	no bid	no bid	no bid
COT/S. Grain	no bid	no bid	no bid
GCAS/Region 1	no bid	no bid	no bid
GCAS/Region 2	no bid	no bid	no bid

Source: Transportation & Marketing/AMS/USDA.

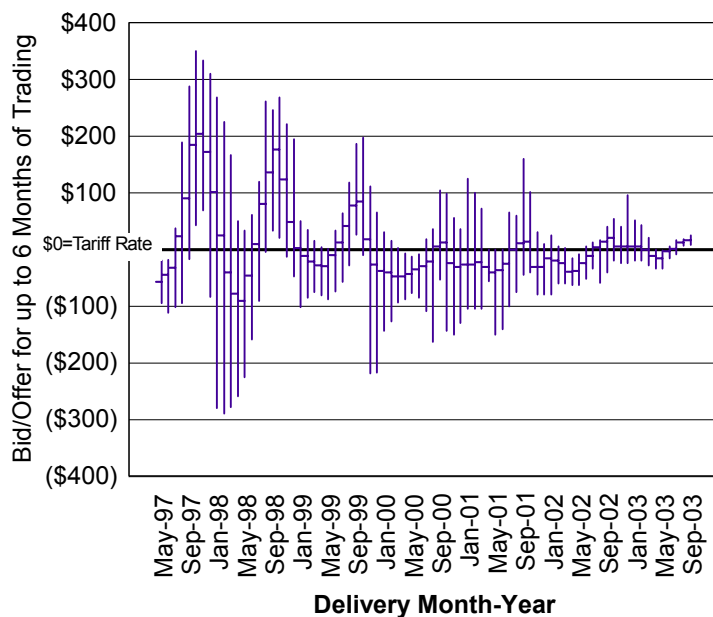
COT=Certificate of Transportation; GCAS=Grain Car Allocation System

### Secondary Rail Car Market

Average Premium/Discount to Tariff, \$/Car - Last Week

	Delivery Period			
	Apr-03	May-03	Jun-03	Jul-03
BNSF-GF	\$(10)	\$(15)	\$(9)	\$(6)
UP-Pool	\$(11)	\$(18)	\$3	\$8

### Secondary Rail Market Bid



### Tariff Rail Rates for Unit Train Shipments

March 2003

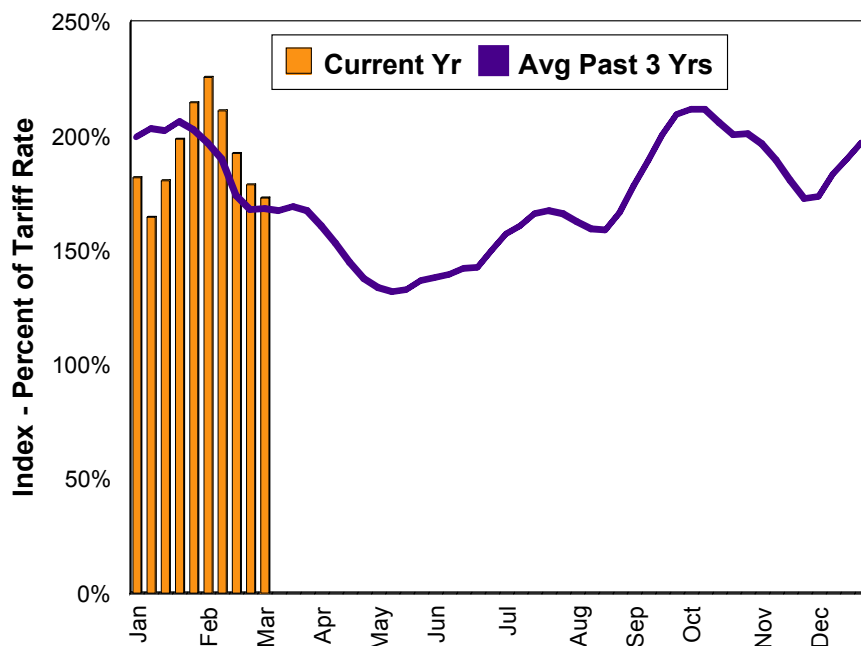
Date Effective	Tariff Item	Commodity	Origin	Destination	Rate Per Car	Rate Per MT	Rate/Per Bushel*
03/03/03	45560	Wheat	Minneapolis, MN	Houston, TX	\$2,050	\$22.60	\$0.62
03/03/03	43521	Wheat	Minneapolis, MN	Portland, OR	\$3,877	\$42.74	\$1.16
03/03/03	46540	Wheat	Kansas City, MO	Houston, TX	\$1,650	\$18.19	\$0.50
03/03/03	43586	Wheat	Kansas City, MO	Portland, OR	\$4,420	\$48.72	\$1.33
03/03/03	43581	Wheat	Omaha, NE	Portland, OR	\$4,005	\$44.15	\$1.20
03/03/03	31005	Corn	Minneapolis, MN	Portland, OR	\$3,050	\$33.62	\$0.85
03/03/03	31035	Corn	Kansas City, MO	Portland, OR	\$2,700	\$29.76	\$0.76
03/03/03	31005	Corn	Omaha, NE	Portland, OR	\$2,850	\$31.42	\$0.80
03/03/03	61110	Soybean	Minneapolis, MN	Portland, OR	\$3,030	\$33.40	\$0.91
03/03/03	61110	Soybean	Omaha, NE	Portland, OR	\$2,780	\$30.64	\$0.83

Source: www.bnsf.com

Approximate load per car = 100 tons: Corn 56 lbs/bu, Wheat & Soybeans 60 lbs/bu

## BARGE TRANSPORTATION

### Illinois River Barge Rate Index - Rate Quotes



The **Illinois River Barge Rate Index** averaged 183% of the Benchmark Tariff Rate between 1999 and 2001, based on weekly market quotes. The **Index**, along with **Rate Quotes** and **Futures Market** bids are indicators of grain transport supply and demand.

Calculating **Barge Rate Per Ton**:  
 $\text{Index} \times 1976 \text{ Tariff Benchmark Rate per Ton}$

Select applicable index from market quotes included in tables on this page. The 1976 benchmark rates per ton are provided in map below.

#### BARGE RATE QUOTES: Southbound Barge Freight

Index=Percent of Tariff, Based on 1976 Tariff Benchmark Rate

	3/19/03	3/13/03	April '03	June '03
Twin Cities	nq	nq	206	198
Mid-Mississippi	187	nq	175	167
Illinois River	175	189	163	158
St. Louis	146	139	138	135
Lower Ohio	140	134	134	136
Cairo-Memphis	123	123	122	124

Source: Transportation & Marketing /AMS/USDA  
 nq=no quote

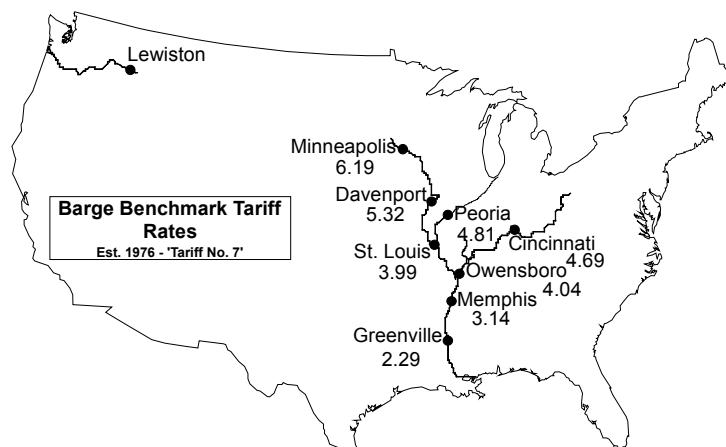
### BARGE FUTURES MARKET

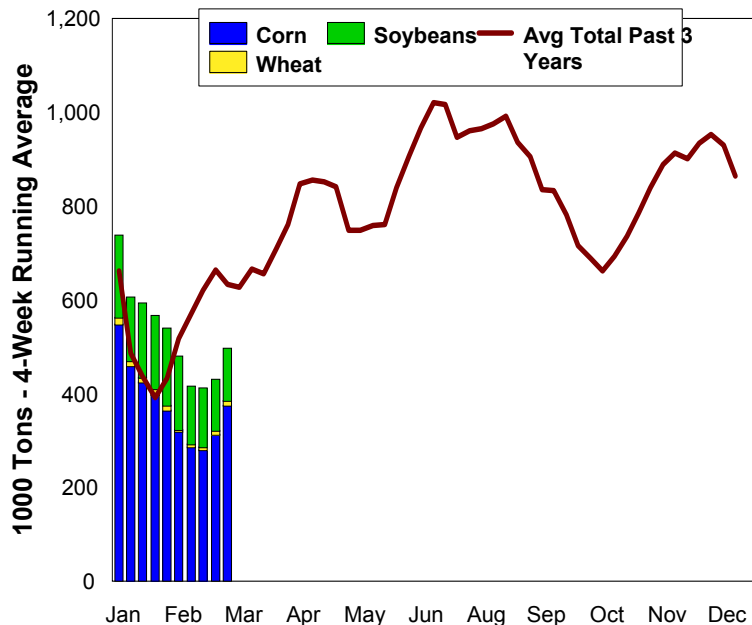
#### Southbound Barge Freight Nominal/Cash Basis Values

Index=Percent of Tariff, Based on 1976 Tariff Benchmark Rate

Week ended	River/Region	Contract Period	Rate	
			Futures	Cash
3/25/03	St. Louis	Apr	n/a	133
		Jun	n/a	140
		Aug	n/a	155
		Oct	n/a	195
		Nov	n/a	195
	Illinois River	Apr	n/a	155
		Jun	n/a	158
		Aug	n/a	173
		Oct	n/a	220
		Nov	n/a	185

Source: St. Louis Merchants Exchange



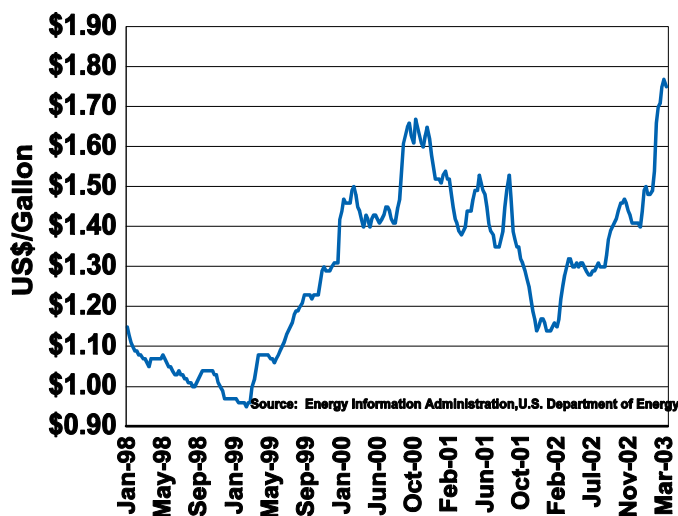
**Barge Movements on the Mississippi River (Lock 27)****Barge Grain Movements (1,000 Tons)**

for week ending 3/15/03

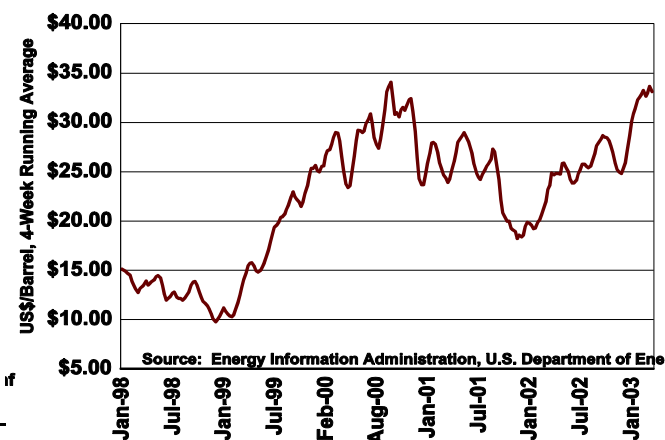
	Corn	Wht	Sybn	Total
<b>Mississippi River</b>				
Rock Island, IL (L15)	0	0	0	0
Winfield, MO (L25)	0	0	0	0
Alton, IL (L26)	429	10	94	533
Granite City, IL (L27)	414	8	79	501
<b>Illinois River (L8)</b>	396	9	134	539
<b>Ohio River (L52)</b>	33	2	43	85
<b>Arkansas River (L1)</b>	0	20	6	26
2003 YTD	4,747	399	2,468	7,894
2002 YTD	6,197	396	2,486	9,567
% of 2002 YTD	77%	101%	100%	83%
Total 2001	31,878	2,679	10,616	47,091

Source: U.S. Army Corp of Engineers

YTD and Calendar year total includes Miss/27, Ohio/52 and Ark/1.

**TRUCK TRANSPORTATION****Weekly U.S. Retail Road Diesel Price**

The weekly **Diesel Price** provides a proxy for trends in U.S. truck rates. Diesel fuel is a significant expense for truck grain movements, accounting for 37% of the estimated variable cost. **Crude Oil Price** is an indicator in future diesel price trends.

**Weekly Brent Crude Price, Friday Close****Crude Oil Prices (03/25/03)**

US\$ per Barrel	This Week	Last Week	
Light Sweet Crude (NYMEX)	26.56	29.78	↓
Brent Crude	26.75	28.44	↓

Note: Light Sweet Crude is exchanged on the New York Mercantile Exchange. North Sea oil has a "benchmark" role in crude oil pricing. Brent crude, a blend of North Sea oils, is traded on the International Petroleum Exchange in London.

Source: [www.eia.doe.gov](http://www.eia.doe.gov); \*U.S. Refiner Crude Acquisition Cost, Composite Domestic & Import

<b>GRAIN EXPORTS</b>
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**U.S. Export Balances (1,000 Metric Tons)**

	Wheat					All	Corn	Soybean	Total
	HRW	SRW	HRS	SWW	DUR				
03/13/2003	1,112	407	1,173	516	144	3,352	6,251	3,448	13,051
This Week Year Ago	1,388	648	807	412	129	3,383	7,283	2,955	13,621
Cumulative Exports-Crop Year									
02/03 YTD	5,660	2,353	5,198	2,850	598	16,659	21,231	22,246	60,136
01/02 YTD	6,718	4,398	4,368	2,605	1,001	19,090	23,849	17,713	60,652
01/02 Total	8,761	5,485	5,582	3,175	1,133	24,135	48,003	29,926	102,064
00/01 Total	9,314	4,445	5,775	5,156	1,130	25,819	47,734	27,567	101,120
99/00 Total	10,629	4,195	5,590	4,055	984	25,453	48,760	26,972	101,185

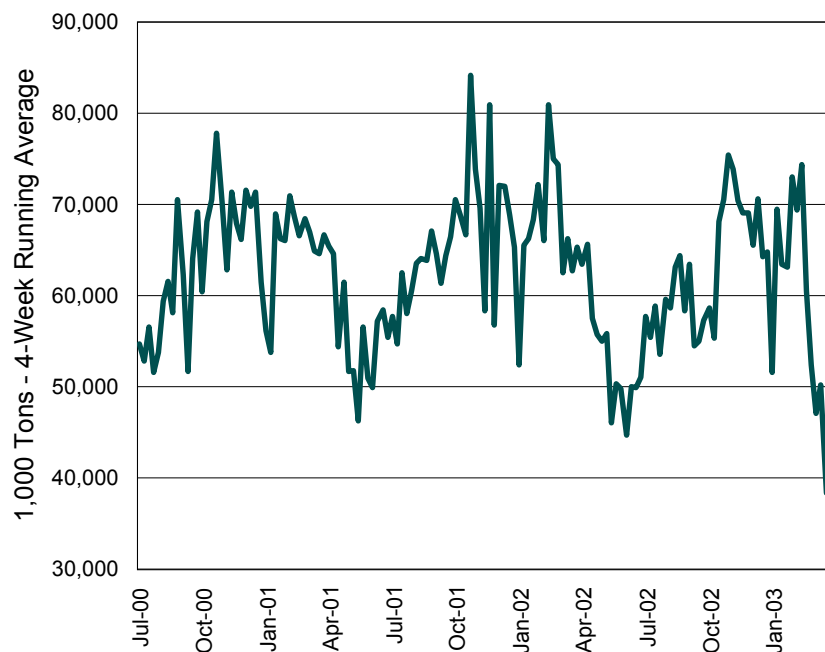
Source: Foreign Agricultural Service YTD-Year-to-Date (w w w .fas.usda.gov)

Crop Year: Wheat=5/31-6/01, Corn &amp; Soybeans=9/01-8/31

**Select U.S. Port Regions - Grain Inspections for Export (1,000 Metric Tons)**

	Pacific Region			Mississippi Gulf			Texas Gulf			Port Region Total		
	Wheat	Corn	Soybn	Wheat	Corn	Soybn	Wheat	Corn	Soybn	Pacific	Mississippi	Texas
03/20/03	203	111	247	31	0	0	59	518	34	561	31	611
2003 YTD	1,765	1,269	1,754	1,101	5,842	7,413	932	526	45	4,788	14,357	1,503
2002 YTD	2,199	1,236	904	1,508	8,425	6,924	1,434	53	197	4,339	16,857	1,683
% of 2002 YTD	80%	103%	194%	73%	69%	107%	65%	999%	23%	110%	85%	89%
2002 Total	10,007	5,877	1,639	6,829	34,991	17,996	6,971	468	468	17,523	59,816	7,906

Source: Federal Grain Inspection Service YTD-Year-to-Date

**U.S. Grain Inspected for Export****Select Canadian Port Export Inspections**

1,000 Metric Tons, Week End Summary

02/13/2003	Wheat	Durum	Barley
Vancouver			17
Prince Rupert	54		
Prairie Direct	2		2
Thunder Bay			
St. Lawrence	2,723	1,495	203
2001/02 YTD	7,275	1,766	534
2002/03 YTD	2,779	1,495	222
% of Last Year	262%	118%	241%

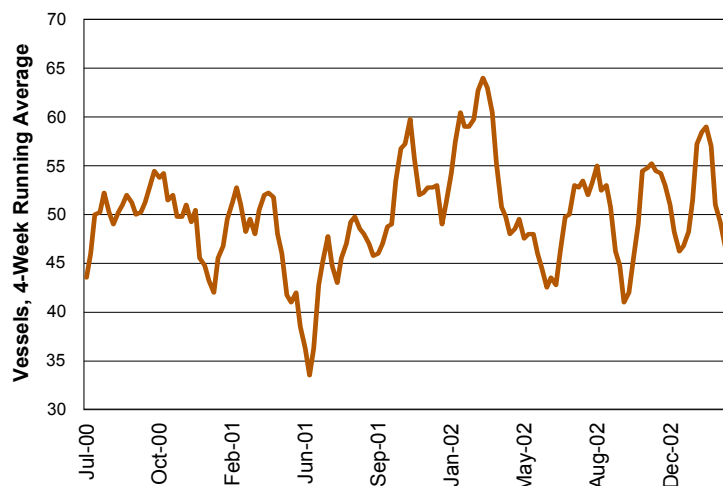
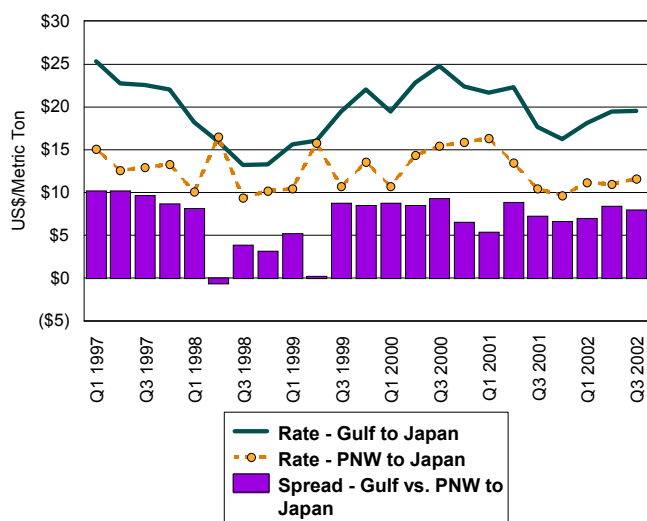
Source: Canadian Grains Commission, Crop Year 8/1-7/31



**Port Region Ocean Grain Vessels**

	Gulf			Pacific Northwest	Vancouver B.C.
	In Port	Loaded 7-Days	Due Next 10-Days	In Port	In Port
03/13/03	31	46	53	11	2
03/20/03	28	40	58	12	6
2002 Range	(15..55)	(33..66)	(44..82)	(3..15)	(0..12)
2002 Avg	35	51	65	8	5

Source: Transportation &amp; Marketing /AMS/ USDA

**Gulf Port Region Grain Vessel Loading Past 7 Days****Grain Vessel Rates to Japan****Quarterly Ocean Freight Rates**

Average Rates &amp; Percentage Changes, U.S. Dollars/Metric Ton

	2002 4 <sup>th</sup> Qtr	2001 4 <sup>th</sup> Qtr	% Change		2002 4 <sup>th</sup> Qtr	2001 4 <sup>th</sup> Qtr	% Change
<b>Gulf to</b>				<b>Pacific NW to</b>			
Japan	\$24.75	\$16.25	52%	Japan	\$15.39	\$9.64	60%
Mexico	\$7.50	-	-				
N. Europe	\$18.07	\$11.73	54%	<b>Argentina/Brazil to</b>			
N. Africa	\$18.33	\$16.98	8%	Med. Sea	\$22.00	-	-
Med. Sea		\$10.58	-	N. Europe	\$22.63	\$15.72	44%

Source: Transportation &amp; Marketing/AMS/USDA

**Ocean Freight Rates for Selected Shipments - week ending 3/22/03**

Export Region	Import Region	Grain	Month	Volume Loaded (Tons)	Freight Rate (\$/Ton)
U.S. Gulf	Mauritania	Wheat	Apr. 1/15	7,500	\$50.00*
U.S. Gulf	Ghana	Wheat	Apr. 1/10	5,940	\$49.00*
U.S. Gulf	Bangladesh	Wheat	Apr. 1/15	17,000	\$108.18*
U.S. Gulf	Japan	Hvy Grain	Apr. 27	54,000	\$29.75

Source: Maritime Research Inc.

Rates shown are for metric ton (2,204.62 lbs.=one metric ton), F.O.B., except where otherwise indicated; op=option

\*Most food aid from the United States is required to be shipped on U.S. flag vessels. The vessels are of limited availability resulting in higher rates. In addition, destinations receiving food aid generally lack adequate port unloading facilities, requiring the vessel to remain in port for a longer duration than normal.

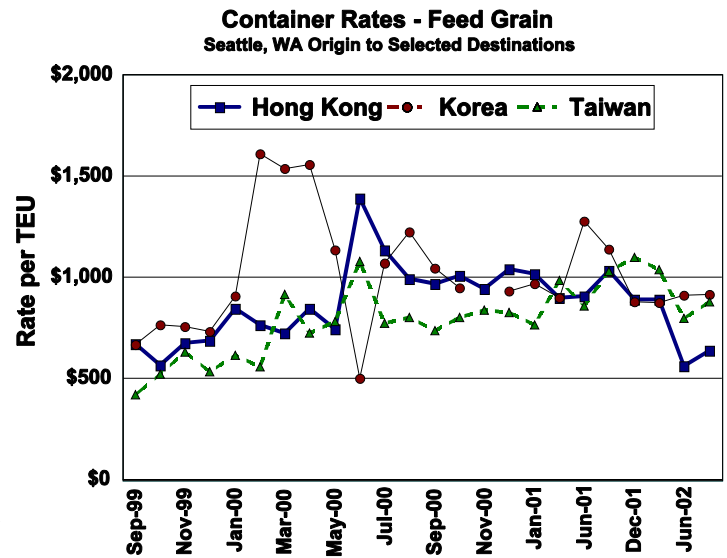
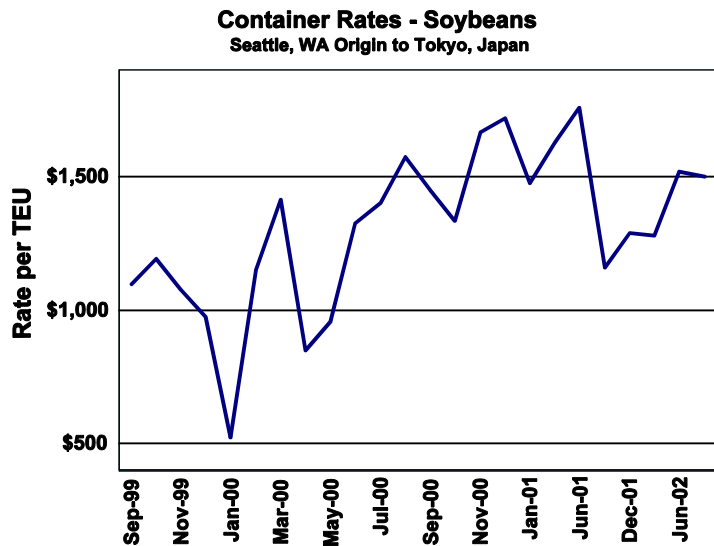


CONTAINER

**Container Ocean Freight Rates**

Average Rate per TEU, Weighed by Shipping Line Market Share

Source: Transportation &amp; Marketing/AMS/USDA, Quarterly Updates



Approximately 420,000 MT of grain and oilseed exports were marketed via container in 2001. This volume increased 26% compared to 1997.